User's Manual

Version 0.4

Mega POS MP-3000 Series
MP-3435 / MP-3432
15" /12" Fanless POS system

Copyright Notice

Safety and Warranty

1. Read these safety instructions carefully.

2. Keep this user's manual for later reference.

3. Disconnect this equipment from any AC outlet before cleaning. Do not use liquid or spray detergents for cleaning. Use a damp cloth.

4. For pluggable equipment, the power outlet must be installed near the equipment and must be easily accessible.

5. Keep this equipment away from humidity.

6. Put this equipment on a reliable surface during installation. Dropping it or letting it fall could cause damage.

7. The openings on the enclosure are for air convection. Protect the equipment from overheating. DO NOT COVER THE OPENINGS.

8. Make sure the voltage of the power source is correct before connecting the equipment to the power outlet.

9. Position the power cord so that people cannot step on it. Do not place anything over the power cord.

10. All cautions and warnings on the equipment should be noted.

11. If the equipment is not used for a long time, disconnect it from the power source to avoid damage by transient over-voltage.

12. Never pour any liquid into an opening. This could cause fire or electrical shock.

13. Never open the equipment. For safety reasons, only qualified service personnel should open the equipment.

14. If any of the following situations arises, get the equipment checked by service personnel:
a. The power cord or plug is damaged.
b. Liquid has penetrated into the equipment.
c. The equipment has been exposed to moisture.
d. The equipment does not work well, or you cannot get it to work according to the user's manual.
e. The equipment has been dropped and damaged.
f. The equipment has obvious signs of breakage.

15. DO NOT LEAVE THIS EQUIPMENT IN AN UNCONTROLLED ENVIRONMENT WHERE THE STORAGE TEMPERATURE IS BELOW -20°C (-4°F) OR A BOVE 60°C (140°F). IT MAY DAMAGE THE EQUIPMENT.

Table of Content

Record of Revision

Date	Specs Ver.	Description	Note
	V0.0	Initial	
	V0.1	Initial	Charles
	V0.2		
2013/4/10	V0.3	CF information correctness and removed	Vince
2013/5/21	V0.4	Cash Drawer Linux Sample Code Revise	Vince

Introduction

MegaPOS Lite (MP-3435 / MP-3432) Introduction

To reach the balance of budget-saving and strong requirement for product quality, MegaPOS Lite is designed with quality-oriented and cost-effective concept. Fanless as it is, MP-3435 / MP- 3432 provide a decent choice for noise-free environment applications with optimized product reliability.

Main Features:

- The most cost-effective solution with built-in customer display and 12VDC out for 2nd display connection without extra adaptor needed.

- Fanless solution for green and noise-free environment.

- Easy maintenance for system parts, such as HDD Sata DOM, and RAM…etc.

- Sufficient I/O access for various connection requirements.

- Integrated cable cover for supporting pole-type VFD / LCD display.

- Compliant with IP54 front panel standard

MP-3435 w/ cable cover & MCR

A Quick Tour for MP-3435

Before you start, take a moment to become familiar with **MP-3435**.

1st Display

Identification Device

System Venting

Power Switch
with LED

HDD LED / LAN LED / USB Port

Built-in Customer
Display (LCM)

Antenna

2nd Display Stand for
Pole-Type VFD/LCD
(attached with 2nd
display option)

HDD Location
(in the bottom)

External I/O
(inside the cable)

Cable Cover

MP-3435 Dimension

308mm
388mm
285mm
85mm
158mm
382mm

356mm
69mm
52mm
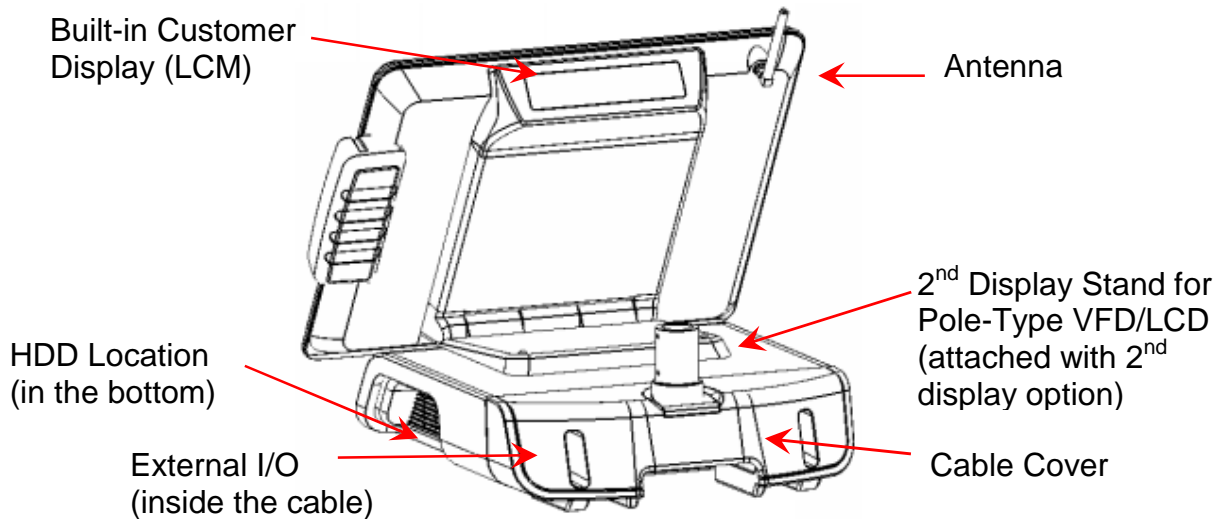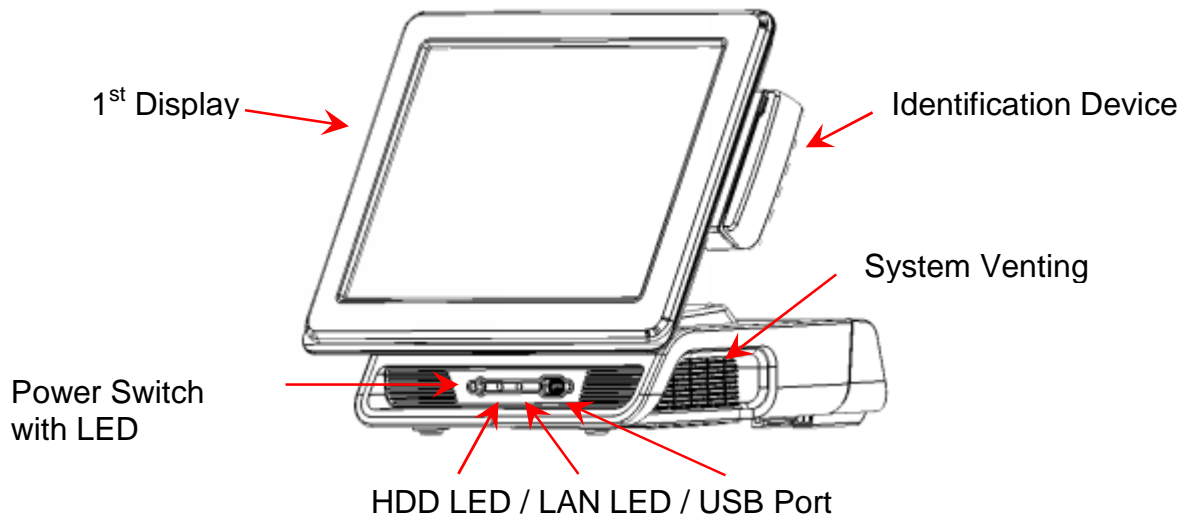
Rear I/O Panel
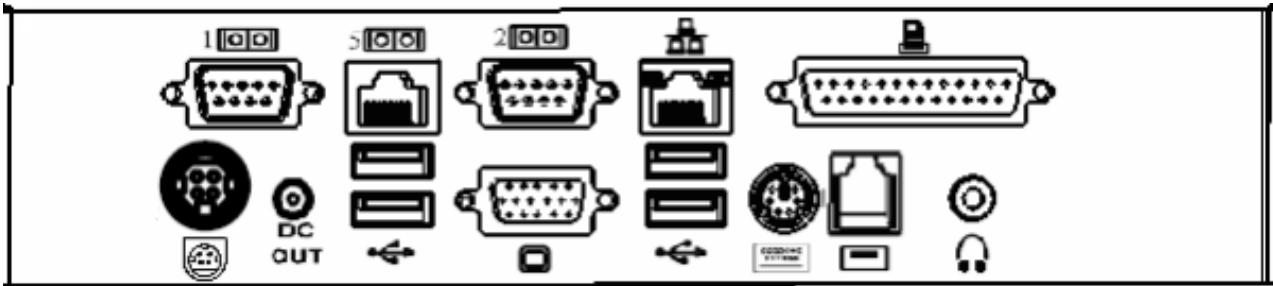
I/O Port	Connector Type	Description
	Earphone connector	Connect the speakers to this port
	USB type A connector	Standard USB connector for external device
	DC-in connector	Connect the power adaptor to this port
DC OUT	12V DC-out connector	This DC-out port can sustain the power of the monitor or any other devices which need 12V DC power input.
5	VFD / RJ45 connector	This RJ45 port can be used to attach a VFD customer display or serve as an additional serial port (switching cable provided).
	RJ11 connector	Cash Drawer Connector, 12 V actuation support
	PS2 connector	Connect the keyboard or mouse to this port
1 / 2	D-SUB 9 connector	The serial ports COM1/COM2 can be used to connect devices such as a printer or a fax/modem.
	Parallel 25-pin LPT Connector	The standard LPT (D-SUB 25 pin) connector for connecting POS printers or KeyPro solution
	RJ45 connector	Connect MP-3435 to the Ethernet
	D-Sub 15 Pin Connector	The VGA port is used for connecting LCD or CRT monitors

Packing List

- MP-3435 / MP-3432 Main System x 1

- Power Adaptor x 1 / AC Power Cord x 1

- Driver & Manual CD x 1

- COM port switching cable (RJ45 to D-SUB 9 pin) x 1

Optional:

- Pole-type Customer Display

- MCR

- Built-in LCM Customer Display Module

- WiFi Wireless Module

Hardware Installation and Upgrading

Warning!

Do not remove the rear cover until you have verified that no power is supplied to the system. Power must be switched off and the power cord must be unplugged. Every time you service the system, you should be aware of this.

2.5" Hard Disk Drive Installation

1. **Turn off power and remove power cord from the system**

2. **Unscrew the maintenance door at the bottom of the unit**
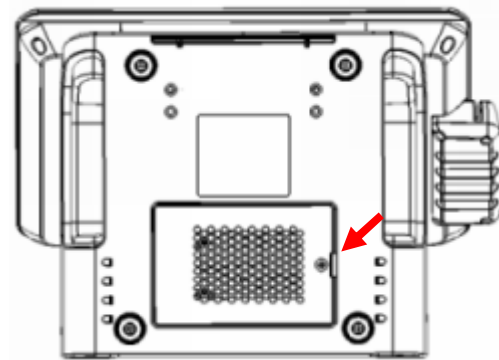
3. **Remove the door and flip it over**
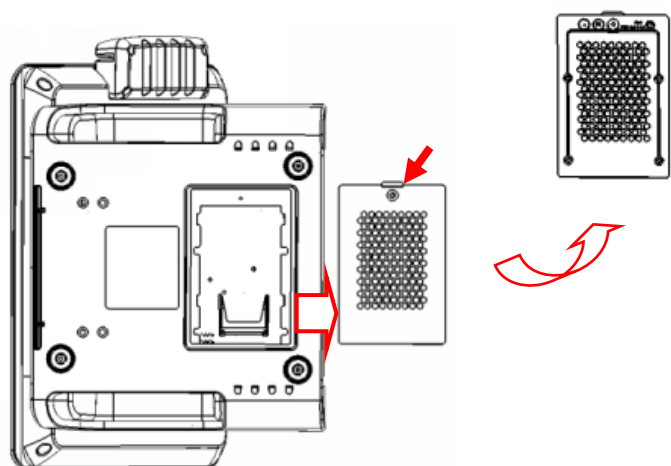
4. **Place HDD kit on the door, fasten it with 4 screws and connect with the SATA cable.**

SATA cable →

2.5" HDD
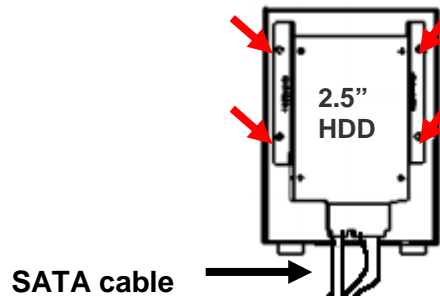
5. **Restore the maintenance door to the system.**

6. **Fix the door with the screw.**

7. **Connect the power cord to the system.**

Pole-Type VFD Installation

1. **Remove the plastic cover on the cable cover**
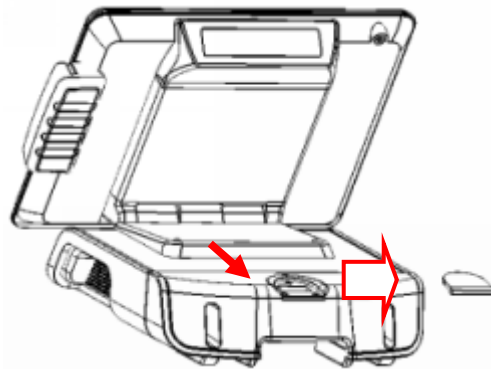
2. **Fix the pole stand with screws and place the pole-type customer display to the stand**
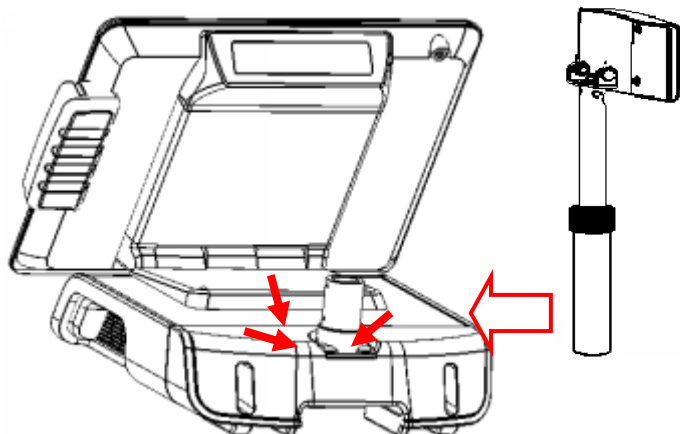
3. **Connect the RJ45 or RS-232 (D-Sub 9) cable to the system.**

Memory (DDRII RAM) / DOM Installation

1. **Unscrew and remove the top cover**
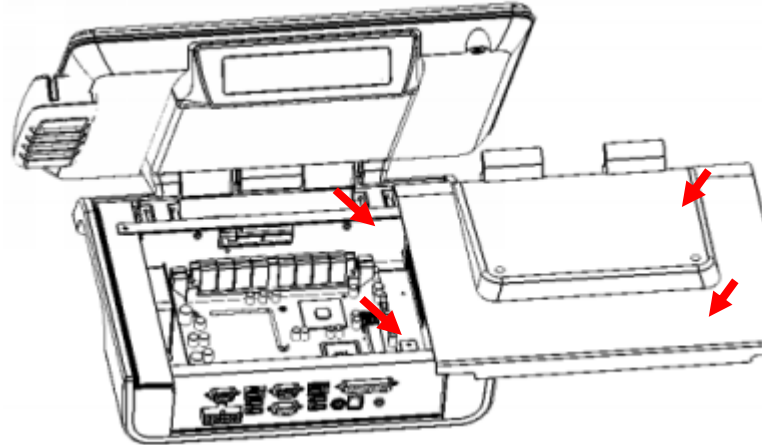
2. **Install the DDRII RAM or DOM you require**

3. **Before restore the top cover, please check the thermal pad stays**

MCR Configuration Modification

This option is for users who need to customize the MCR configurations for a particular task.
To enter the Configuration Mode, please execute text editor program (such as Microsoft Word, Notepad…etc.) first, and then press [Ctrl] + [Alt] + [F10]. The following menu will appear accordingly.

```
**** CONFIGURATION MODE ****

1:SET INTERFACE

2:SET MAGNETIC STRING

3:SET STRING EDITING

4:SET BUZZER

5:RESET TO DEFAULT

6:SHOW STATUS

7:SET KEYBOARD CONFIGURATION

0:EXIT SETUP MODE
```

For detailed instruction, please refer to the MSR212 Programmer's Manual under the path below in the driver CD: Utility\Pos Utility\MCR util\Uniform

Cash Drawer Installation

Before connecting the cash drawer to the **MP-3435 / MP-3432**, please make sure the drive voltage and cable pin assignment of the cash drawer matches the definition of the cash drawer port of **MP-3435 / MP-3432**. Please refer to the jumper setting and pin definition(for more information on the Cash Drawer.

Plug cash drawer cable into cash drawer port.

Note: If the cash drawer cannot be detected by the system, please refer to <u>troubleshooting</u>.
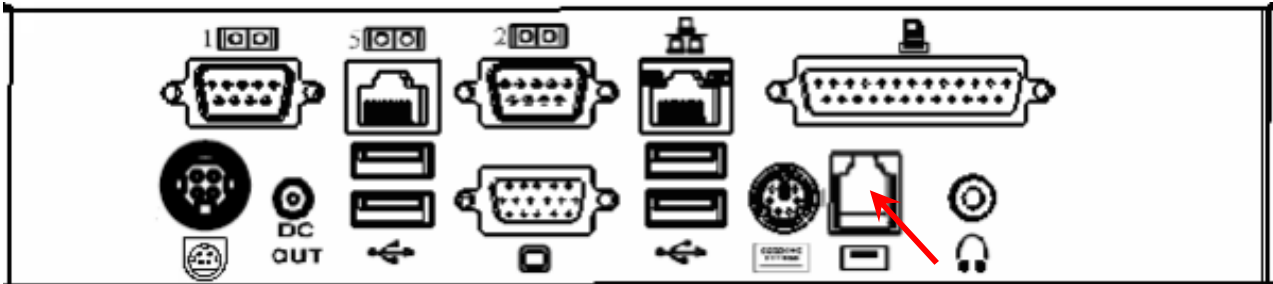
Up to two cash drawers may be driven from this port. Driving voltage of the solenoid is DC+12V. I/O port 284 is used for drawer operation. A test program is supplied, for Linux and Windows, sample code of which is available on request by software developers.

Value	Description
0x284	Output address.
0x284 read 8bit	Bit 2 => 0: low 1: high
0x200	Sleep 200ms
0x01	Open cashdrawer1 value.
0x02	Open cashdrawer2 value.
0x04	Close cash-drawer value.
0x04	Cash-drawer status mask.

Chapter 3

Software Installation and Setup

MP-3435 comes with a variety of drivers for different operating systems.

You may find the system CD with all the necessary drivers and utilities.

Please follow this installation sequence.

Driver installation sequence:

Chipset Driver -> VGA Driver -> LAN Driver -> Audio Driver ->SMbus Driver->Touch Tools

The reason to follow our sequence is that IRQ settings will be changed by Windows XP to non supported values, and you may encounter unnecessary problems later.

Chipset Driver Installation

Intel ATOM D525 Chipset Installation Utilities for Windows XP

1. Insert the CD into your CD ROM Drive.

2. Locate the folder of **D:\ Windows XP \ 1.Chipset\Setup**
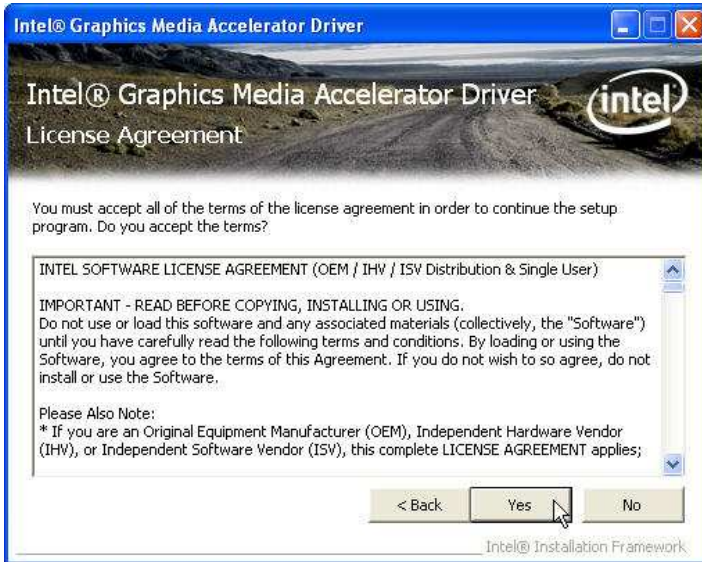

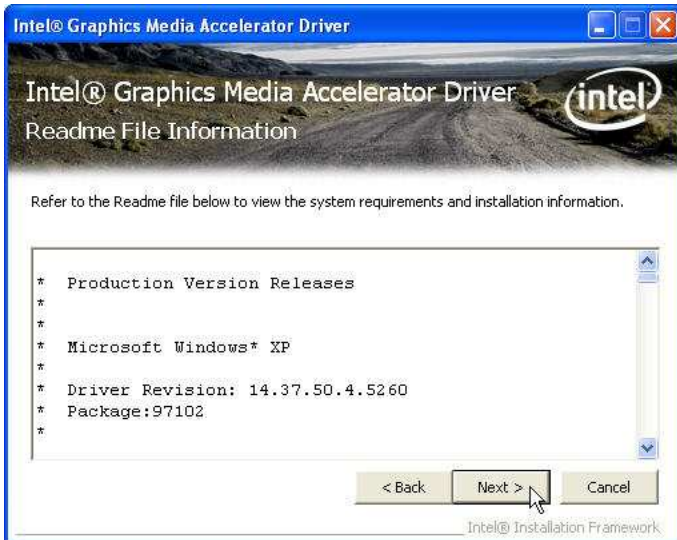3. Open **Setup.exe** and Click **Next**.

4. Read the License Agreement and click **Yes**.
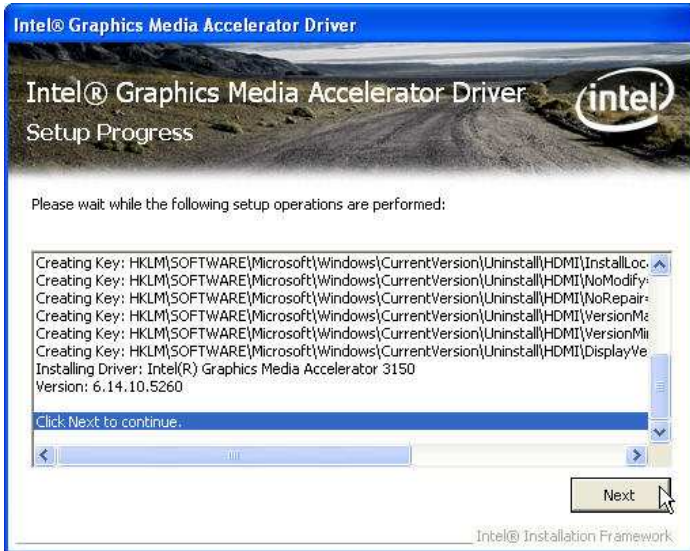
5. Click **Next** and the drivers for the Intel Chip set will install.

6. Please wait while the setup program processing.

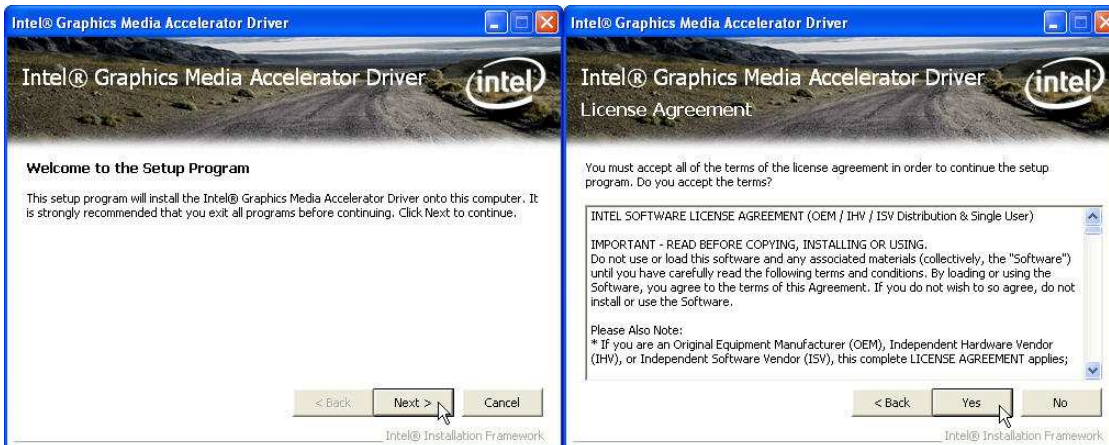**7.** When the 'Setup COMPLETE' message appears click **Finish** to restart your computer.

VGA Driver Installation

GMA3159 driver installation for Windows XP

1. Locate the folder of **D:\ Windows XP \ 3. VGA \ Setup.exe**
2. Open **Steup.exe**

3. Select **Next** and click Yes of License Agreement Page.

4. Select **Next** to continue driver installation.

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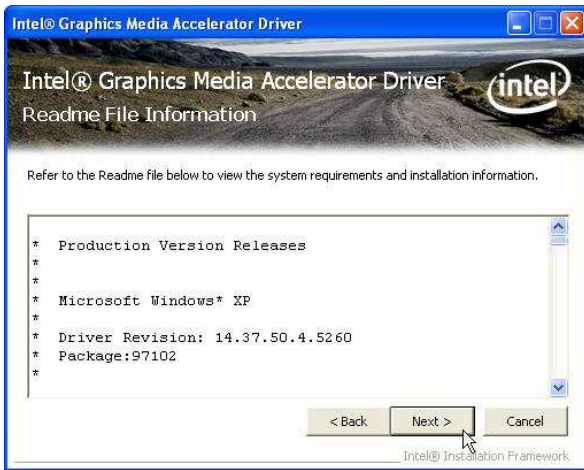
5. Finally, **Finish** and **Restart** the system

LAN Driver Installation

Realtek RT8111E LAN Driver Installation for Windows XP

1. Locate **D:\ WindowXP \ 4. LAN\ Setup.exe**
2. Double click **Setup.exe**.

3. Click **Next** to continue
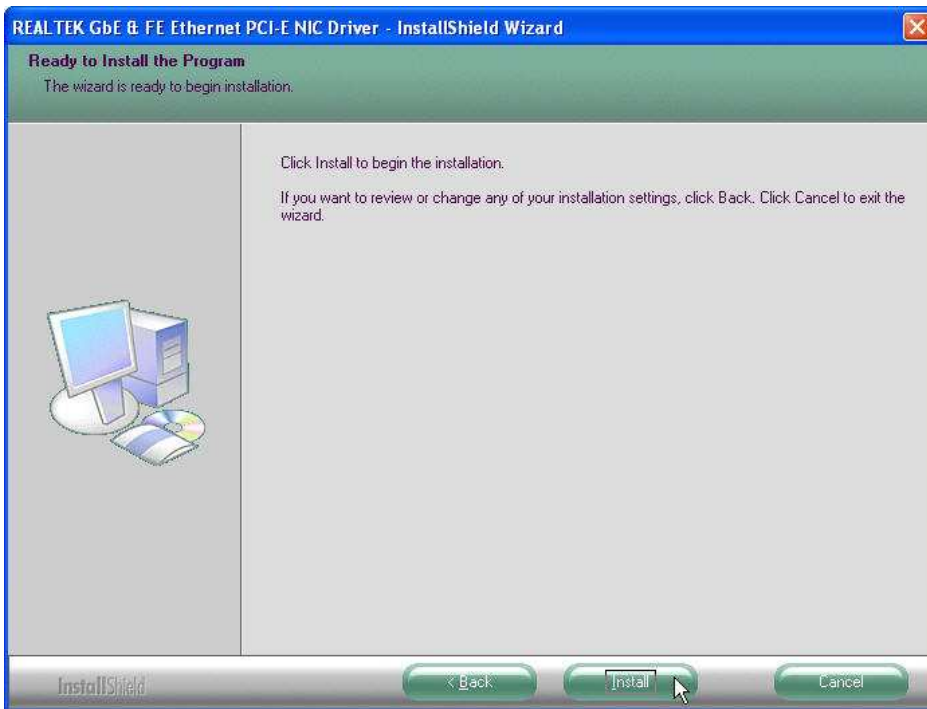
4. Click **Next** to continue

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5. Please wait while processing.

6. Click **Finish** to complete the installation procedure.

Audio Driver Installation

Realtek ALC269 Audio Driver Installation for Windows XP

1. Locate **D:\Windows XP \ 5. Audio\ WDM_R253.exe**
2. Double click **WDM_R253.exe**.
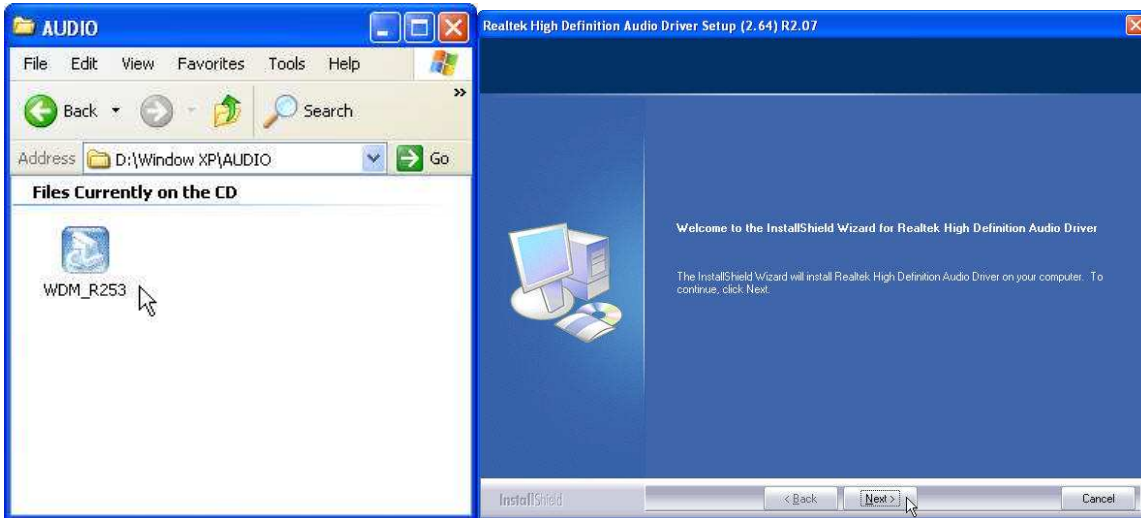
3. Click **Next** to continue.
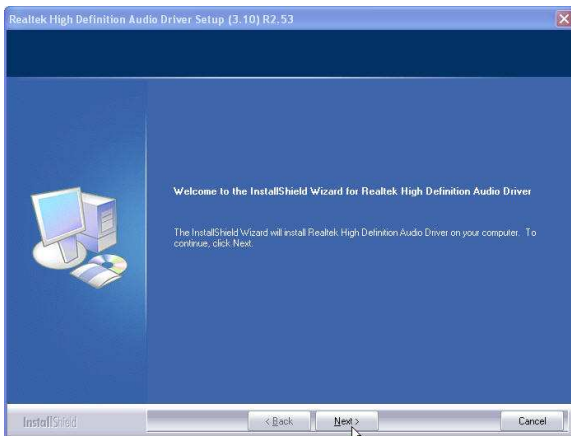
4. Click **Finish** and restart the system.
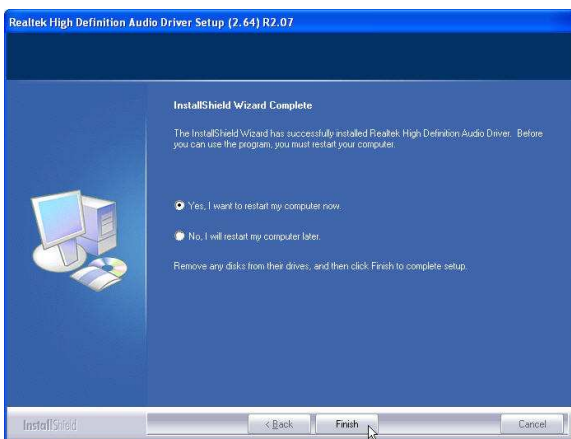
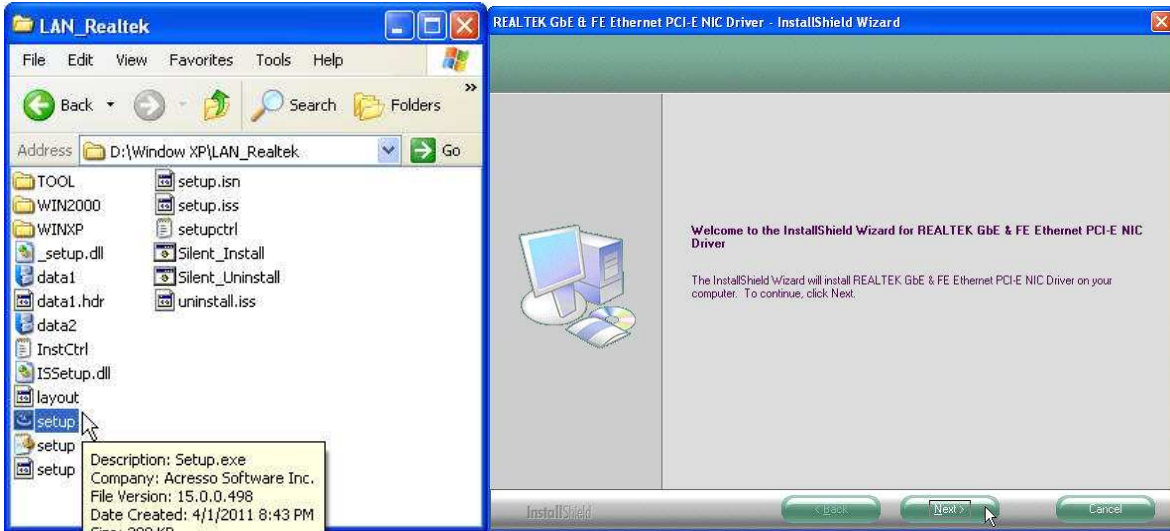# SMbus Driver Installation

SMbus Driver Installation for Windows XP

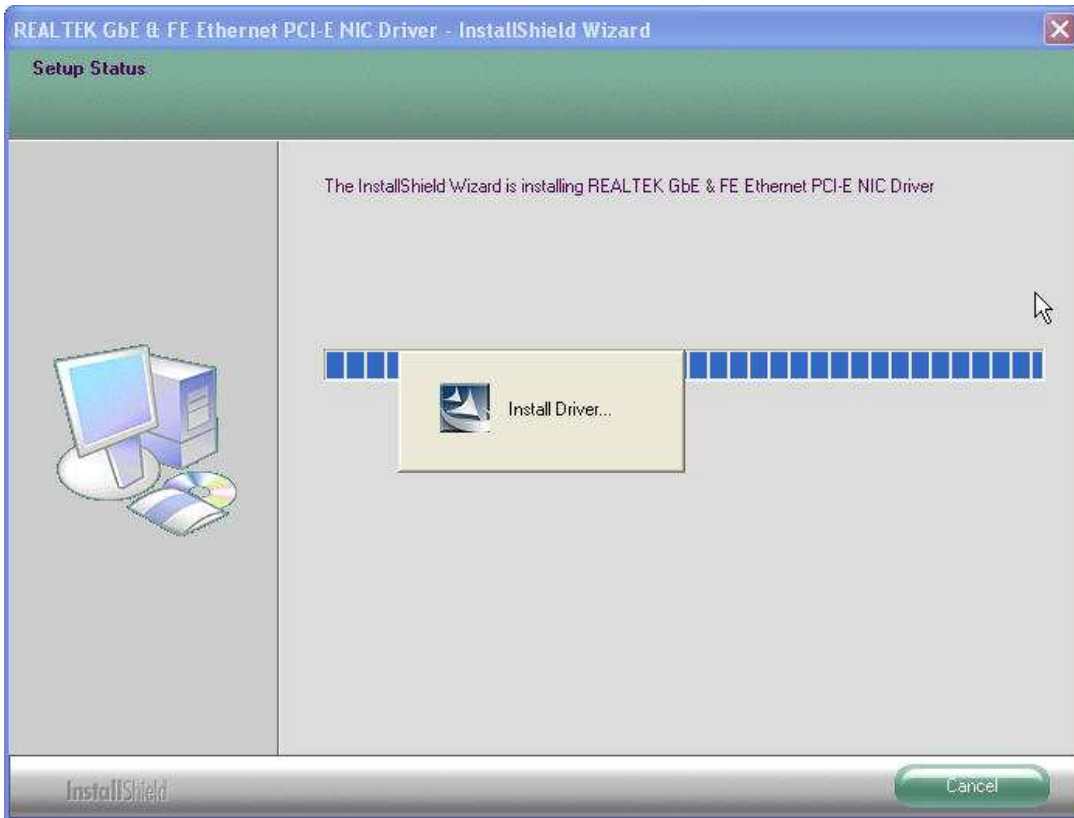1. Locate **D:\ Windows \ 3. VGA \ Setup.exe**
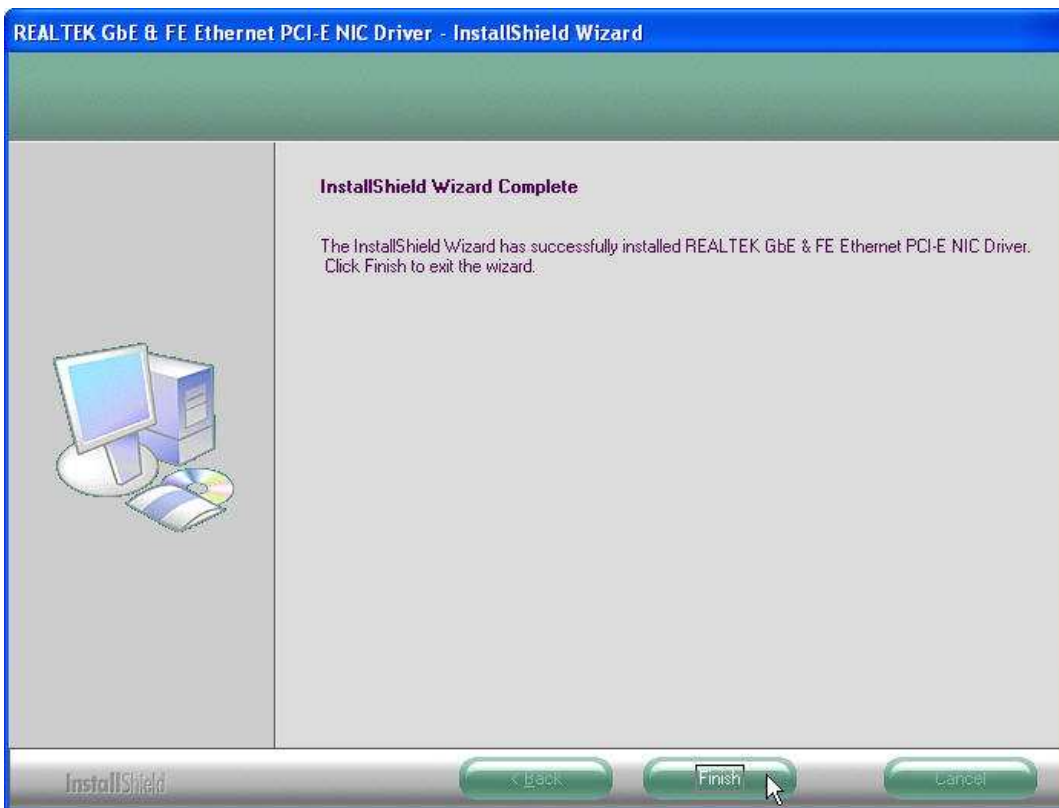2. Double click **Setup.exe**, and Click **Next** to start driver installation

3. Click **Yes** for license agreement

4. choose **Next** for the following steps
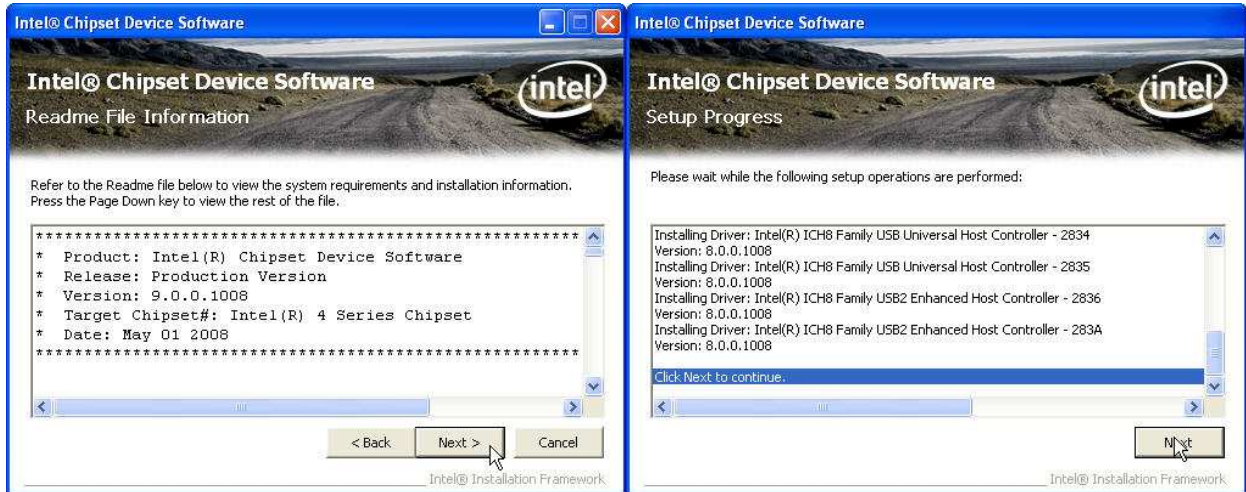
5. Finish and **Restart** system.

ELO Touch Tools Installation

ELO Touch Tools Installation for Windows XP

1. Locate **D:\Utility\Touch Screen\ELO Touch\XP_Vista**

2. Open **SW601379_TETouch.exe**
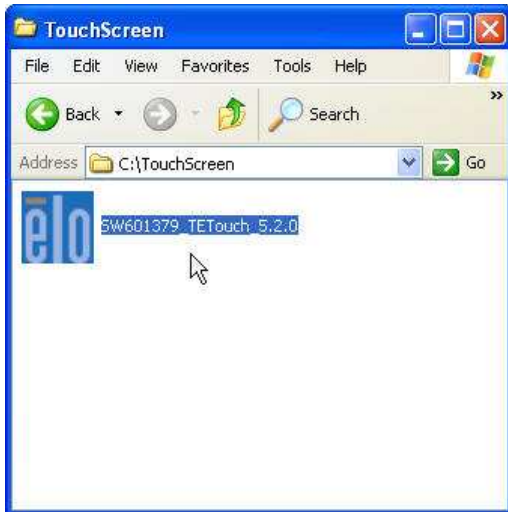
3. Click **OK** to continue.

4. Click **Unzip**; Unzip the files successfully and click **OK** to continue the installation.

5. Click **Next** to continue.

6. Choose **Install Serial Touch Screen Driver** and click **Next** to continue.

7. Read the *"License Agreement"* and click **Yes** and select **Auto Detect ELO touchscreens** and click **Next**
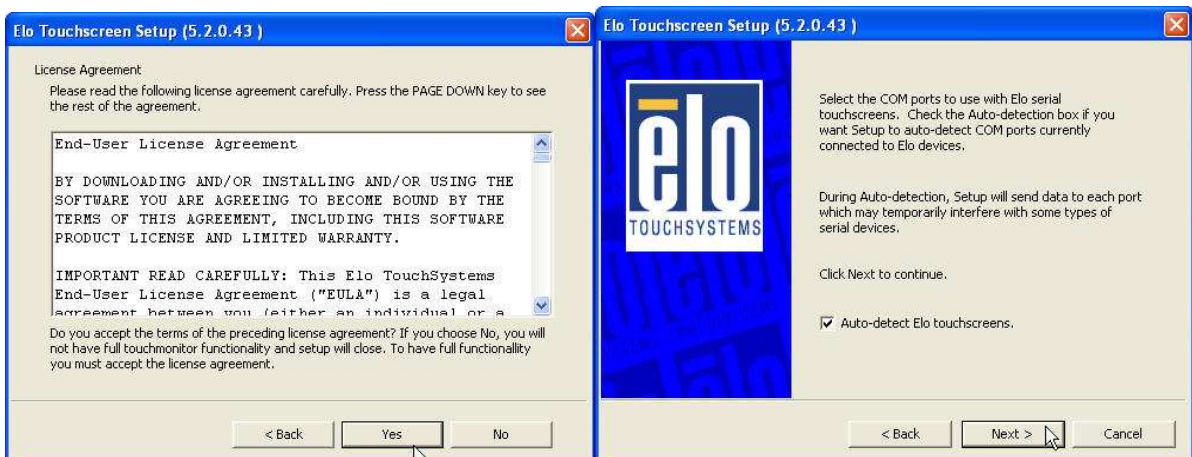
8. Select **COM3** and click **Next** for further installation steps.

9. Setup complete and execute **Calibrate Elo Touch Screen Monitors** and **Click** Finish.

10. Start calibrating the touchscreen by touch the targets showed on the screen.
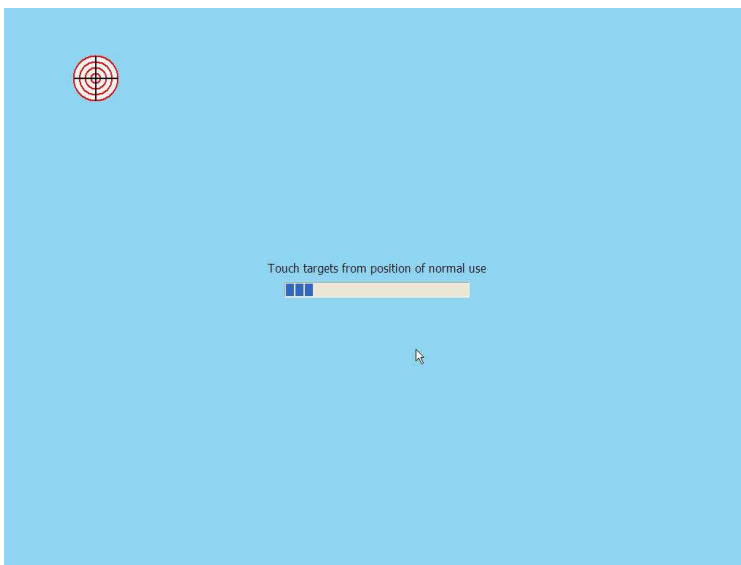
11. According to ELO Touch Screen Properties; Confirm the Touch **Driver Version is 5.2.0.43** and Make sure the COM port listed is **COM3** for your touch monitor; adjust a proper sound of touch buzzer Press **Next** to continue.
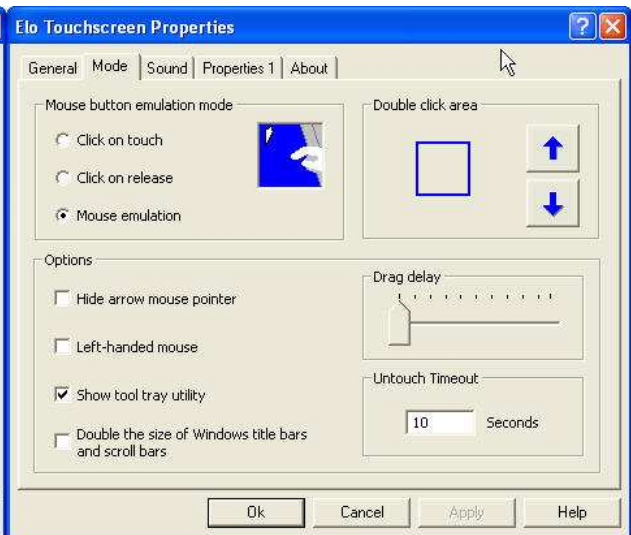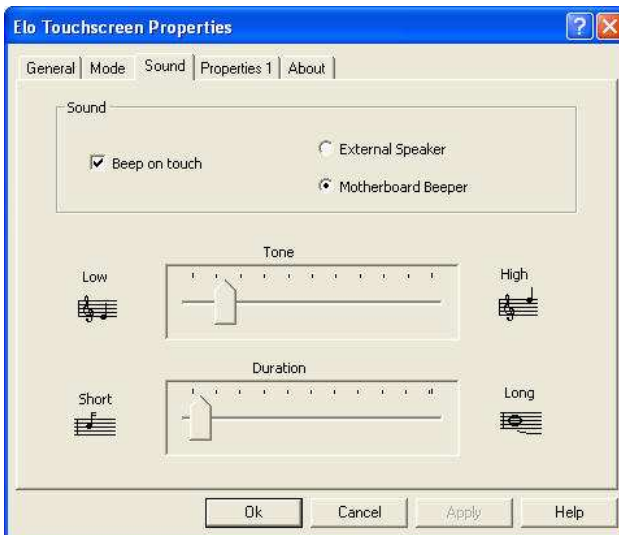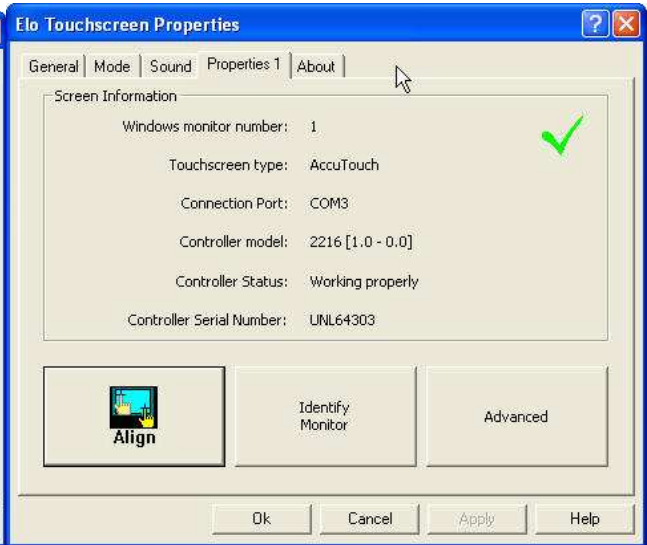
12. If the cursor is working fine, click [✓] to finish the setting; if not, click [↶] to calibrate the screen again.

IT MAY BE NECESSARY TO RESTART YOUR COMPUTER TO UTILIZE YOUR TOUCHSCREEN FEATURES.

13. Click **Restart** to reboot your computer again.

ELO Control Panel

This section explains the different options in the ELO control Panel.

General tab

The general tab allows you to:

- Change the COM port your touch screen is set to.
- Calibrate the touch screen with the **Align** button.

Mode tab

The Buttons tab allows you to:

- Adjust all mouse emulation controls.
- Change cursor properties
- Enable or disable right mouse button utility.
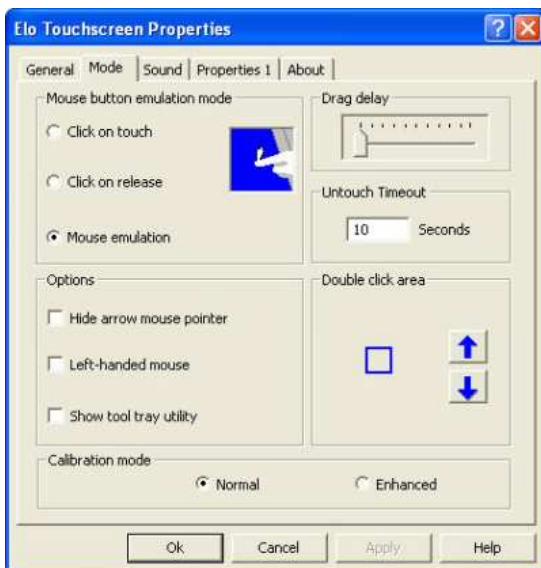
Sound tab

The Sound tab allows you to:

- To change sound properties for ELO touch tools.
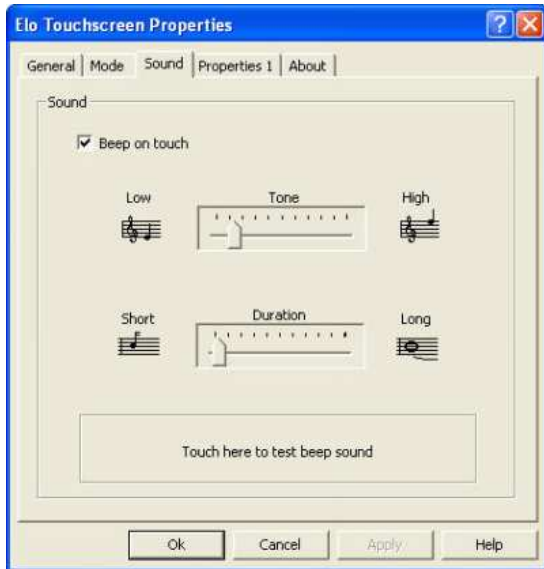
Properties tab

The Diagnostics tab allows you to:

- View Controller Information.
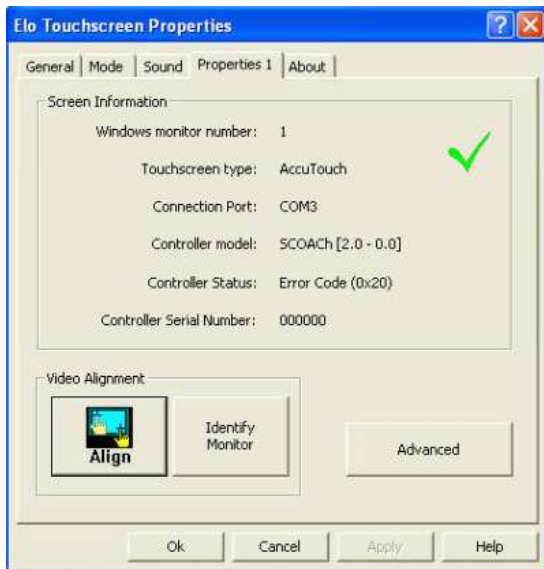
About tab

The About tab displays Information about ELO Touch systems

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EETI TouchKit Tools Installation

EETI TouchKit Installation for Windows XP

1. Locate **D:\Utility\TouchScreen\TouchKit(EETI)\Windows 2000 XP**

2. Select the relevant folder for the operating system that you are using.

3. Open **Setup.exe**
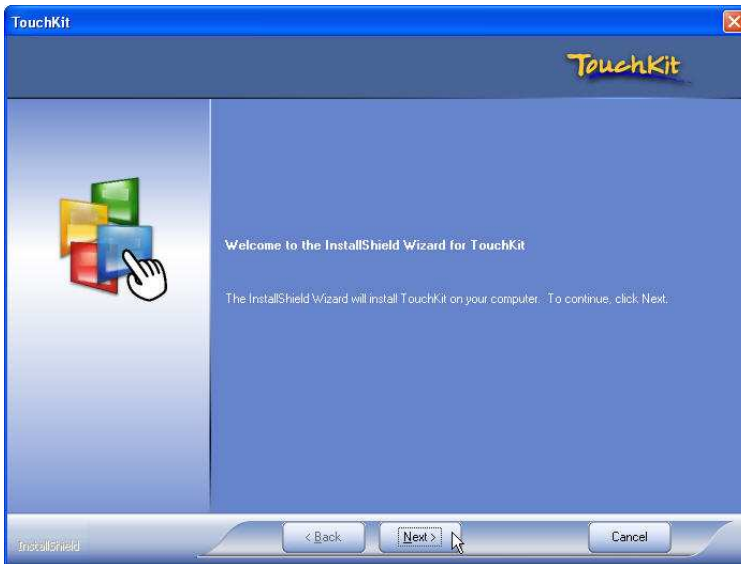
4. Click **Next**
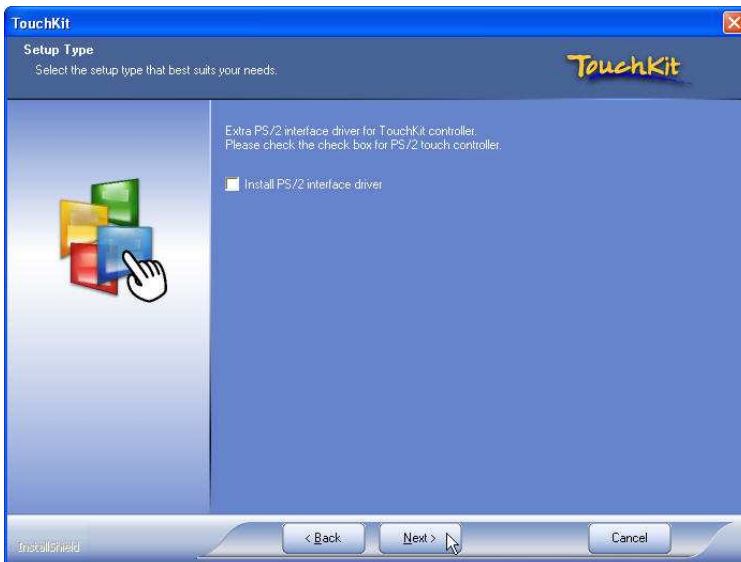
5. Click **Next**
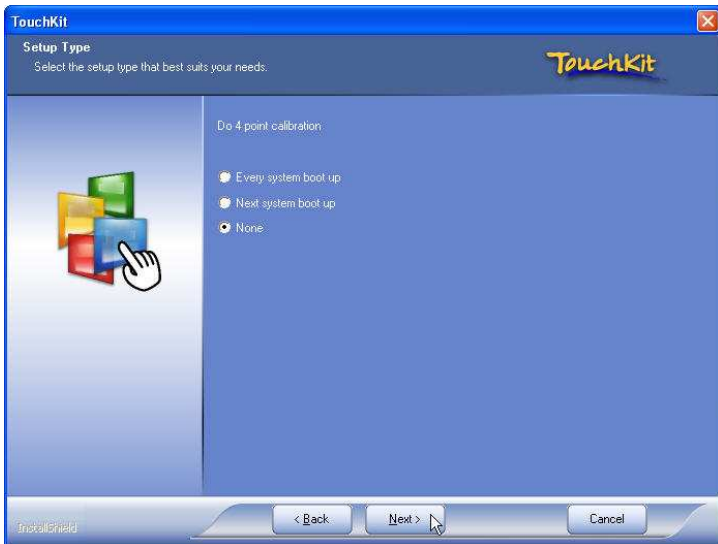
6. Click **Next**

7. Click **OK** to close the pop-up dialog.
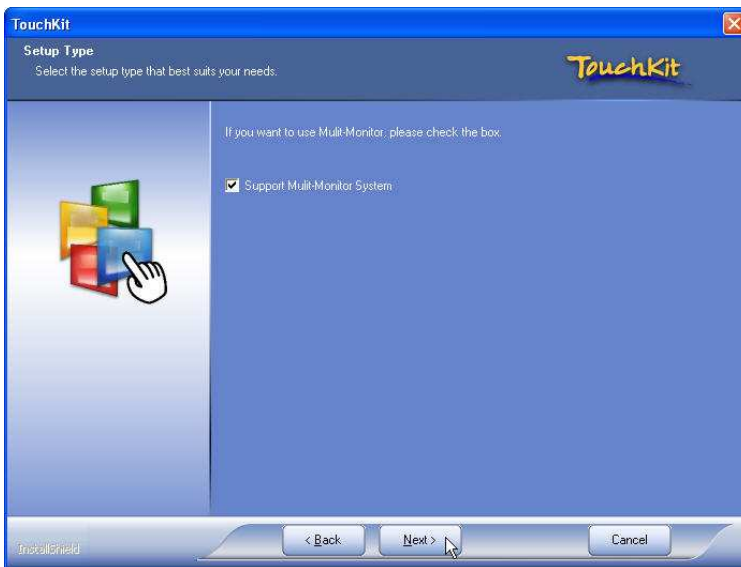
8. Click **"Support Multi-Monitor System"** and then **Next** to continue.
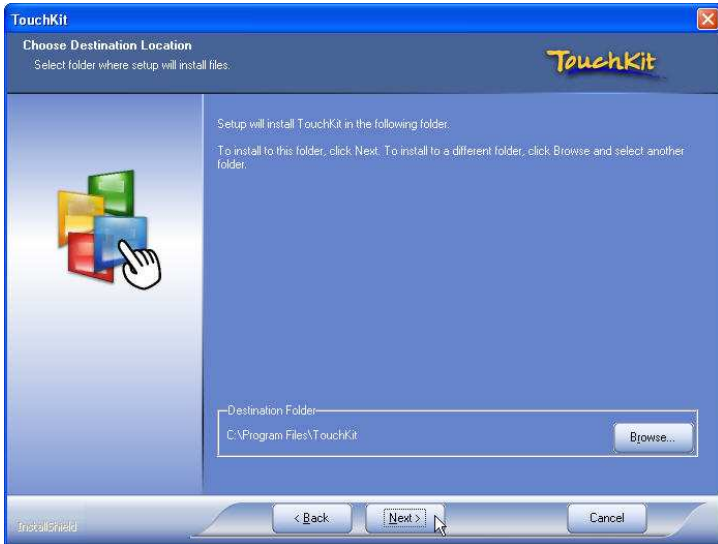
9. Click **Next**

10. Click **Next**
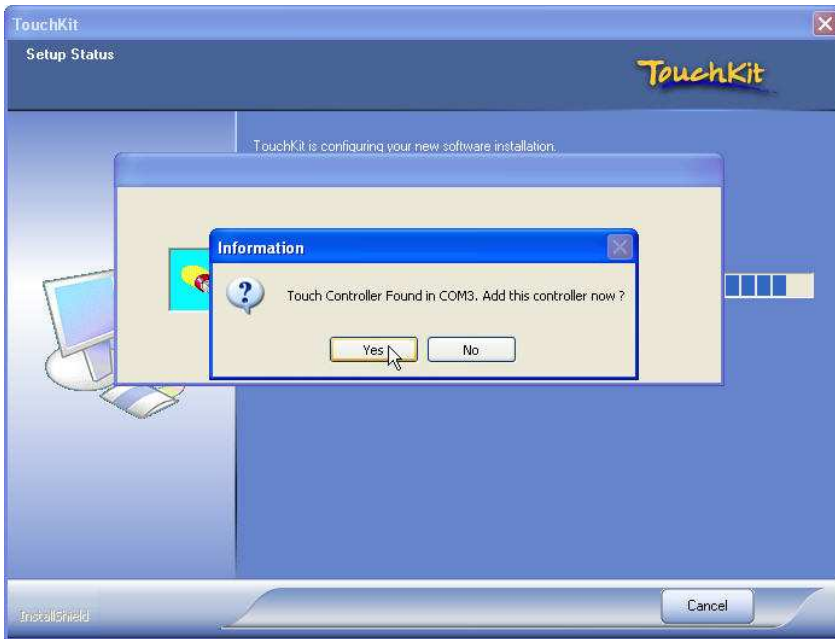
11. Click **Yes**

12. Click **OK** and turn off the computer to restart your system again.

After the system finish rebooting follow the directions to calibrate the Touch screen.

TouchKit Control Panel

This section explains the different options in the TouchKit control Panel.

General tab

The general tab allows you to:

- Manage the touch screen controller you installed.
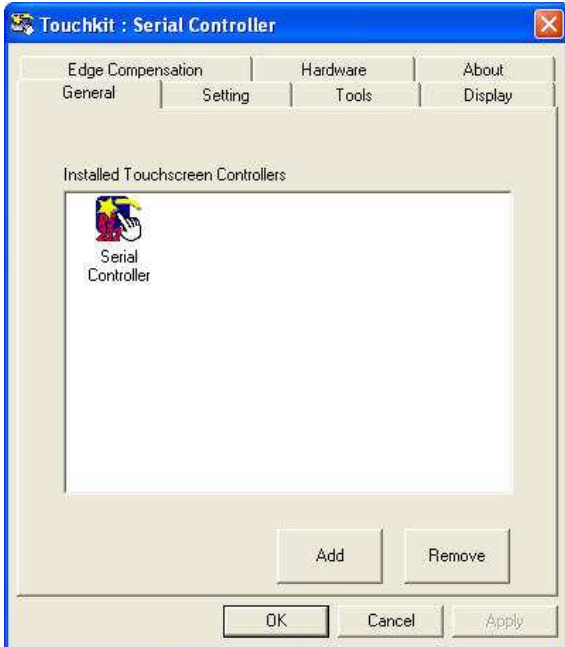
Tools tab

The tools tab allows you to:

- Calibrate the touch screen with the **4 Points Calibration** button.
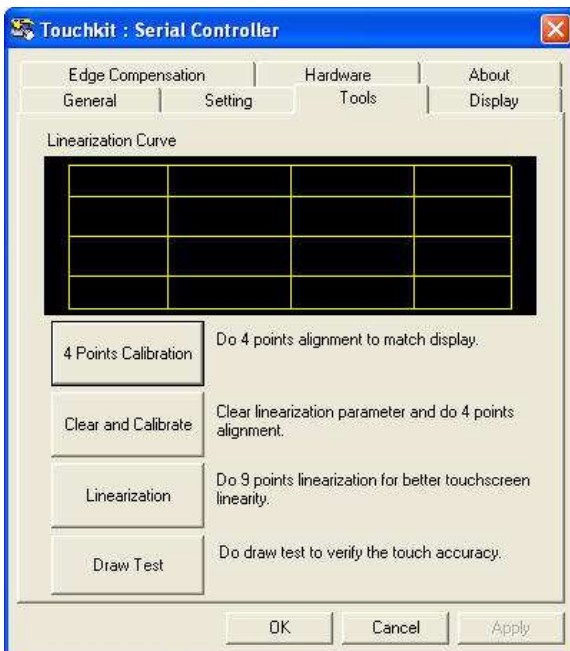
Wireless LAN Driver Installation

Wireless LAN Driver Installation for all Windows Operating Systems (Optional)

1. Open **D:\Wireless LAN folder**

2. Run **Setup.EXE**

3. Click **Next**

4. Click **Next**

13
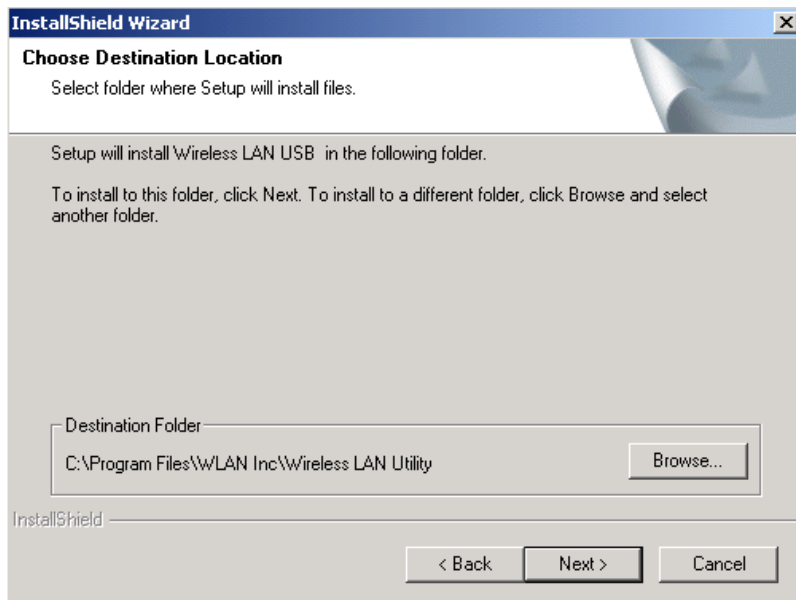
Chapter 4

Specifications

MP-3435 Specifications

System Configuration	
CPU (On Board)	INTEL ATOM D525 (1.8GHz with 1M L2 cache)
Chipset	ICH8M
Memory	1 x 204pin DDR3 up to 4GB memory
VGA controller	GMA3150
LCD Panel	15" TFT LCD Panel (1024x768).
Touch Panel	15" with 5-wire Resistive Touch Panel
Storage	Internal 2.5" Serial ATA 160GB hard disk drive as default Support type II Compact Flash™ Disk.
Speaker	Integrated 2W x 2 stereo system speakers
Power	90 watts external power adaptor
I/O Port	
Serial Port	3 x User available COM ports (COM1, COM2, COM5). 2 x System assigned COM ports (COM3 & COM4). ➢ COM3 for primary touch screen. ➢ COM4 for built-in LCM customer display 1 x Reserved (COM6).
Parallel Port	Support EPP/SPP/ECP
USB Port	6 x USB 2.0 ports (1*Internal, 5*External)
Cash Drawer Port	RJ11 Cash drawer port,12V actuation.
Keyboard Port	One PS/2 keyboard port.
LAN Port	Gb Ethernet LAN, Realtek RTL8111E
VGA Port	Standard D-SUB 15 Pin VGA Port
Audio Port	Integrated Sound Blaster compatible (Realtek ALC269)/Built-in stereo speakers
Optional Features	
Customer display	➢ Built-in LCM module ➢ Pole-type VFD customer display

	➢ Pole-type LCD customer display
MSR	External Magnetic Stripe Card Reader track 1/2/3
Wireless	➢ Internal WiFi Module(USB)
Power Consumption	
Power Consumption	20 – 30W (Standard system while running programs and accessing HDD).
Operating temperature	
Operating Temperature	0 ℃ ~ 40 ℃

Troubleshooting

Please note that the following troubleshooting guide is designed for people with strong computer hardware knowledge such as System Administrators and Engineers.

Touch Panel Does Not Work

A)   Check CMOS settings, COM3 needs to be "Enabled".

B)   Check if there are no conflicts between COM3 and any other devices.

C)   Check if the ELO driver or the TouchKit driver has been properly installed. Or try to re-install again (Please refer to the ELO driver installation or the TouchKit driver).

D)   Check if the ELO controller or the TouchKit driver on COM3 has been detected during the ELO driver or the TouchKit driver installation. If yes, then check if the flat cable from the ELO touch screen or the TOUCHKIT touch screen has been properly connected to the ELO controller or the TouchKit controller (**Attention:** Pin1 mark should be on the same side as the ELO controller).

E)   Check if the ELO controller Green LED is blinking?

   If no, there is no DC+5V support for the ELO controller from the motherboard.

F)   Touch screen controller could be defective or the touch panel could be defective.

ELO Touch Panel Cannot Calibrate Correctly

A)   Please replace the ELO controller, and re-calibrate. If this works, change back to the original ELO controller, and re-calibrate.

B)   If the ELO touch panel still cannot calibrate correctly after changing to a new ELO controller, the touch panel may be not installed properly or it could be defective.

Cannot Detect HDD

A)   SATA cable is not connected properly to main board or it could be defective.

B)   HDD power cable is not connected properly to the main board or it could be defective.

C)   Check CMOS setup, set SATA HDD to Auto Detect.

D)   On-board SATA port could be defective.

PS/2 Keyboard Is Not Functioning Normally

A) Make sure the keyboard is properly connected to the PS/2 keyboard port before the system is powered up. If the keyboard is connected after Windows2000 has been booted, the keyboard will not work.

B) Check that the LED on the keyboard goes on then off after power on. If yes, the keyboard is getting power correctly.

C) The main board could be defective.

LAN Is Not Functioning Properly

A) Check if the LAN driver is installed properly.

B) Check if there are any IRQ conflicts.

C) Check if the RJ45 cable is properly connected.

D) The on-board LAN chip could be defective.

COM1, COM2, COM5 Are Not Functioning Properly

A) Check if the I/O ports are enabled in the CMOS setup.

B) Check if there are any IRQ conflicts.

C) The main board or I/O cable could be defective.

Cash Drawer Port Is Not Functioning Properly

A) Make sure the pin assignment matches between the cash drawer and the RJ11 cash drawer port.

B) Verify if the digit I/O port address and bit are correct.

C) The main board could be defective.

USB Device Is Not Functioning Properly

A) Ensure that the USB controller is "enabled" in the CMOS setup.

B) Ensure that the USB Legacy is "enabled" in the CMOS setup. (Windows 2000、Window XP Professional)

C) Ensure that the USB Legacy is "Disabled" in the CMOS setup. (Embedded OS: Windows XP Embedded、Window CE. NET、Linux RedHat 9)